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**(54) PRODUCTION OF HYDROGEN PEROXIDE**

**(57) Abstract:**

**PURPOSE:** To obtain a high concn. hydrogen peroxide in high selectivity without the presence of a halogen ion by using a platinum group metal catalyst modified with a specified metallic element and allowing oxygen to react catalytically with hydrogen in a reaction medium.

**CONSTITUTION:** This reaction catalyst is obtained by depositing a platinum group metal catalyst which is obtained by modifying 1-10wt.% platinum group element such as palladium and platinum per catalyst carrier with more than 1/2 times, by wt., at least one kind of element selected among lead, zinc, gallium and bismuth

on the catalyst carrier such as titanium oxide. The acidic aq. soln. which is obtained by adding the inorg. acid such as sulfuric acid, nitric acid, phosphoric acid which does not contain a halogen ion is used as the reaction medium, and  $\approx 1$ g reaction catalyst per 1l reaction medium and a stabilizing agent in need are added to the reaction medium, and the gaseous mixture of gaseous hydrogen, oxygen and nitrogen on volume base is fed into an autoclave, and the hydrogen peroxide is produced by allowing to react under agitation at a pressure of 3-150kg/cm<sup>2</sup>.G and a temp. of 0-50°C for 30min-6hr.

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